

SEQUENCE LISTING

<110> NAKATSURA, Tetsuya
NISHIMURA, Yasuharu

<120> CANCER ANTIGEN AND USE THEREOF

<130> P26795

<140> US 10/525,831

<141> 2005-02-25

<150> National Stage of PCT/JP2003/011049

<151> 2003-08-29

<150> JP2002/255668

<151> 2002-08-30

<150> JP2002/341168

<151> 2002-11-25

<160> 23

<170> PatentIn version 3.3

<210> 1

<211> 858

<212> PRT

<213> Homo sapiens

<400> 1

Met	Ser	Val	Val	Gly	Leu	Asp	Val	Gly	Ser	Gln	Ser	Cys	Tyr	Ile	Ala
1				5					10					15	

Val	Ala	Arg	Ala	Gly	Gly	Ile	Glu	Thr	Ile	Ala	Asn	Glu	Phe	Ser	Asp
			20					25					30		

Arg	Cys	Thr	Pro	Ser	Val	Ile	Ser	Phe	Gly	Ser	Lys	Asn	Arg	Thr	Ile
		35					40					45			

Gly	Val	Ala	Ala	Lys	Asn	Gln	Gln	Ile	Thr	His	Ala	Asn	Asn	Thr	Val
	50					55					60				

Ser Asn Phe Lys Arg Phe His Gly Arg Ala Phe Asn Asp Pro Phe Ile
65 70 75 80

Gln Lys Glu Lys Glu Asn Leu Ser Tyr Asp Leu Val Pro Leu Lys Asn
85 90 95

Gly Gly Val Gly Ile Lys Val Met Tyr Met Gly Glu Glu His Leu Phe
100 105 110

Ser Val Glu Gln Ile Thr Ala Met Leu Leu Thr Lys Leu Lys Glu Thr
115 120 125

Ala Glu Asn Ser Leu Lys Lys Pro Val Thr Asp Cys Val Ile Ser Val
130 135 140

Pro Ser Phe Phe Thr Asp Ala Glu Arg Arg Ser Val Leu Asp Ala Ala
145 150 155 160

Gln Ile Val Gly Leu Asn Cys Leu Arg Leu Met Asn Asp Met Thr Ala
165 170 175

Val Ala Leu Asn Tyr Gly Ile Tyr Lys Gln Asp Leu Pro Ser Leu Asp
180 185 190

Glu Lys Pro Arg Ile Val Val Phe Val Asp Met Gly His Ser Ala Phe
195 200 205

Gln Val Ser Ala Cys Ala Phe Asn Lys Gly Lys Leu Lys Val Leu Gly
210 215 220

Thr Ala Phe Asp Pro Phe Leu Gly Gly Lys Asn Phe Asp Glu Lys Leu
225 230 235 240

Val Glu His Phe Cys Ala Glu Phe Lys Thr Lys Tyr Lys Leu Asp Ala
245 250 255

Lys Ser Lys Ile Arg Ala Leu Leu Arg Leu Tyr Gln Glu Cys Glu Lys
 260 265 270

Leu Lys Lys Leu Met Ser Ser Asn Ser Thr Asp Leu Pro Leu Asn Ile
 275 280 285

Glu Cys Phe Met Asn Asp Lys Asp Val Ser Gly Lys Met Asn Arg Ser
 290 295 300

Gln Phe Glu Glu Leu Cys Ala Glu Leu Leu Gln Lys Ile Glu Val Pro
 305 310 315 320

Leu Tyr Ser Leu Leu Glu Gln Thr His Leu Lys Val Glu Asp Val Ser
 325 330 335

Ala Val Glu Ile Val Gly Gly Ala Thr Arg Ile Pro Ala Val Lys Glu
 340 345 350

Arg Ile Ala Lys Phe Phe Gly Lys Asp Ile Ser Thr Thr Leu Asn Ala
 355 360 365

Asp Glu Ala Val Ala Arg Gly Cys Ala Leu Gln Cys Ala Ile Leu Ser
 370 375 380

Pro Ala Phe Lys Val Arg Glu Phe Ser Val Thr Asp Ala Val Pro Phe
 385 390 395 400

Pro Ile Ser Leu Ile Trp Asn His Asp Ser Glu Asp Thr Glu Gly Val
 405 410 415

His Glu Val Phe Ser Arg Asn His Ala Ala Pro Phe Ser Lys Val Leu
 420 425 430

Thr Phe Leu Arg Arg Gly Pro Phe Glu Leu Glu Ala Phe Tyr Ser Asp
 435 440 445

Pro Gln Gly Val Pro Tyr Pro Glu Ala Lys Ile Gly Arg Phe Val Val
 450 455 460

Gln Asn Val Ser Ala Gln Lys Asp Gly Glu Lys Ser Arg Val Lys Val
 465 470 475 480

Lys Val Arg Val Asn Thr His Gly Ile Phe Thr Ile Ser Thr Ala Ser
 485 490 495

Met Val Glu Lys Val Pro Thr Glu Glu Asn Glu Met Ser Ser Glu Ala
 500 505 510

Asp Met Glu Cys Leu Asn Gln Arg Pro Pro Glu Asn Pro Asp Thr Asp
 515 520 525

Lys Asn Val Gln Gln Asp Asn Ser Glu Ala Gly Thr Gln Pro Gln Val
 530 535 540

Gln Thr Asp Ala Gln Gln Thr Ser Gln Ser Pro Pro Ser Pro Glu Leu
 545 550 555 560

Thr Ser Glu Glu Asn Lys Ile Pro Asp Ala Asp Lys Ala Asn Glu Lys
 565 570 575

Lys Val Asp Gln Pro Pro Glu Ala Lys Lys Pro Lys Ile Lys Val Val
 580 585 590

Asn Val Glu Leu Pro Ile Glu Ala Asn Leu Val Trp Gln Leu Gly Lys
 595 600 605

Asp Leu Leu Asn Met Tyr Ile Glu Thr Glu Gly Lys Met Ile Met Gln
 610 615 620

Asp Lys Leu Glu Lys Glu Arg Asn Asp Ala Lys Asn Ala Val Glu Glu
 625 630 635 640

Tyr Val Tyr Glu Phe Arg Asp Lys Leu Cys Gly Pro Tyr Glu Lys Phe
 645 650 655

Ile Cys Glu Gln Asp His Gln Asn Phe Leu Arg Leu Leu Thr Glu Thr
 660 665 670

Glu Asp Trp Leu Tyr Glu Glu Gly Glu Asp Gln Ala Lys Gln Ala Tyr
 675 680 685

Val Asp Lys Leu Glu Glu Leu Met Lys Ile Gly Thr Pro Val Lys Val
 690 695 700

Arg Phe Gln Glu Ala Glu Glu Arg Pro Lys Met Phe Glu Glu Leu Gly
 705 710 715 720

Gln Arg Leu Gln His Tyr Ala Lys Ile Ala Ala Asp Phe Arg Asn Lys
 725 730 735

Asp Glu Lys Tyr Asn His Ile Asp Glu Ser Glu Met Lys Lys Val Glu
 740 745 750

Lys Ser Val Asn Glu Val Met Glu Trp Met Asn Asn Val Met Asn Ala
 755 760 765

Gln Ala Lys Lys Ser Leu Asp Gln Asp Pro Val Val Arg Ala Gln Glu
 770 775 780

Ile Lys Thr Lys Ile Lys Glu Leu Asn Asn Thr Cys Glu Pro Val Val
 785 790 795 800

Thr Gln Pro Lys Pro Lys Ile Glu Ser Pro Lys Leu Glu Arg Thr Pro
 805 810 815

Asn Gly Pro Asn Ile Asp Lys Lys Glu Glu Asp Leu Glu Asp Lys Asn
 820 825 830

720

aaggaaactg ctgaaaacag cctcaagaaa ccagtaacag attgtgttat ttcagtcgcc
780

tccttcttta cagatgctga gaggcgatct gtgttagatg ctgcacagat tgttggccta
840

aactgtttta gacttatgaa tgacatgaca gctgttgctt tgaattacgg aatttataag
900

caggatctcc caagcctgga tgagaaacct cggatagtgg tttttgttga tatgggacat
960

tcagcttttc aagtgtctgc ttgtgctttt aacaaggga aattgaaggt actgggaaca
1020

gcttttgatc ctttcttagg aggaaaaaac ttogatgaaa agttagtggg acatttctgt
1080

gcagaattta aaactaagta caagttggat gcaaaatcca aaatacgagc actcctacgt
1140

ctgtatcagg aatgtgaaaa actgaaaaag ctaatgagct ctaacagcac agaccttcca
1200

ctgaatatcg aatgctttat gaatgataaa gatgtttccg gaaagatgaa caggtcacaa
1260

tttgaagaac tctgtgctga acttctgcaa aagatagaag tacccttcta ttcactgttg
1320

gaacaaactc atctcaaagt agaagatgtg agtgcagttg agattgttgg aggcgctaca
1380

cgaattccag ctgtgaagga aagaattgcc aaattctttg gaaaagatat tagcacaaca
1440

ctcaatgcag atgaagcagt agccagagga tgtgcattac agtgtgcaat actttccccg
1500

gcatttaaag ttagagaatt ttccgtcaca gatgcagttc cttttccaat atctctgatc
1560

tggaaccatg attcagaaga tactgaaggt gttcatgaag tcttttagtcg aaaccatgct
1620

gctcctttct ccaaagttct cacctttctg agaagggggc cttttgagct agaagctttc

1680

tattctgata cccaaggagt tccatatcca gaagcaaaaa taggccgctt tgtagttcag
1740

aatgtttctg cacagaaaga tggagaaaaa tctagagtaa aagtcaaagt gcgagtcaac
1800

acccatggca ttttcaccat ctctacggca tctatggtgg agaaagtccc aactgaggag
1860

aatgaaatgt cttctgaagc tgacatggag tgtctgaatc agagaccacc agaaaacca
1920

gacactgata aaaatgtcca gcaagacaac agtgaagctg gaacacagcc ccaggtacaa
1980

actgatgctc aacaaacctc acagtctccc ccttcacctg aacttacctc agaagaaaac
2040

aaaatcccag atgctgacaa agcaaataaa aaaaaagttg accagcctcc agaagctaaa
2100

aagcccaaaa taaaggtggt gaatgttgag ctgcctattg aagccaactt ggtctggcag
2160

ttagggaaag accttcttaa catgtatatt gagacagagg gtaagatgat aatgcaagat
2220

aaattggaag aagaaaggaa tgatgctaaa aatgcagttg aggaatatgt gtatgagttc
2280

agagacaagc tgtgtggacc atatgaaaaa tttatatgtg agcaggatca tcaaaatttt
2340

ttgagactcc tcacagaaac tgaagactgg ctgtatgaag aaggagagga ccaagctaaa
2400

caagcatatg ttgacaagtt ggaagaatta atgaaaattg gcaactccagt taaagttcgg
2460

tttcaggaag ctgaagaacg gccaaaaatg tttgaagaac taggacagag gctgcagcat
2520

tatgccaaga tagcagctga cttcagaaat aaggatgaga aatacaacca tattgatgag
2580

tctgaaatga aaaaagtgga gaagtctggt aatgaagtga tggaatggat gaataatgtc

2640

atgaatgctc aggctaaaaa gagtcttgat caggatccag ttgtacgtgc tcaggaaatt
2700

aaaacaaaaa tcaaggaatt gaacaacaca tgtgaacccg ttgtaacaca accgaaacca
2760

aaaattgaat cacccaaact ggaaagaact ccaaattggcc caaatattga taaaaaggaa
2820

gaagatttag aagacaaaaa caattttggt gctgaacctc cacatcagaa tggatgaatgt
2880

taccctaatag agaaaaattc tgttaatatg gacttggact agataacctt aaattggcct
2940

attccttcaa ttaataaaat atttttgcc tagtatgtga ctctacataa catactgaaa
3000

ctatttatat tttctttttt aaggatatat agaaattttg tgtattatat ggaaaaagaa
3060

aaaaagctta agtctgtagt ctttatgata ctaaaaggga aaattgcctt ggtaactttc
3120

agattcctgt ggaattgtga attcactata agctttctgt gcagtctcac catttgcata
3180

actgaggatg aaactgactt ttgtcttttg gagaaaaaaa actgtactgt tgttcaagag
3240

ggctgtgatt aaaatcttta agcatttggt cctgccaagg tagttttctt gcattttgct
3300

ctccattcag catgtgtgtg ggtgtggatg ttataaaca agactaagtc tgacttcata
3360

agggttttct aaaaccattt ctgtccaaga gaaaatgact ttttgctttg atattaaaaa
3420

ttcaatgagt aaaacaaaag ctagtcaaatt gtgttagcag catgcagaac aaaaacttta
3480

aactttctct ctactatac agtatattgt caatgtgaaa gtgtggaatg gaagaaatgt
3540

cgatcctgtt gtaactgatt gtgaacactt ttatgagctt taaaataaag ttcactttat

3600

ggtgtcattt t
3611

<210> 3
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> immune-stimulating peptide

<400> 3

Asn Tyr Gly Ile Tyr Lys Gln Asp Leu
1 5

<210> 4
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> immune-stimulating peptide

<400> 4

Ala Phe Asn Lys Gly Lys Leu Lys Val Leu
1 5 10

<210> 5
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> immune-stimulating peptide

<400> 5

Lys Tyr Lys Leu Asp Ala Lys Ser Lys Ile
1 5 10

<210> 6
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> immune-stimulating peptide

<400> 6

Gln Phe Glu Glu Leu Cys Ala Glu Leu
 1 5

<210> 7
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> immune-stimulating peptide

<400> 7

Met Tyr Ile Glu Thr Glu Gly Lys Met Ile
 1 5 10

<210> 8
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> immune-stimulating peptide

<400> 8

Thr Phe Leu Arg Arg Gly Pro Phe Glu Leu
 1 5 10

<210> 9
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 9

Glu	Tyr	Val	Tyr	Glu	Phe	Arg	Asp	Lys	Leu
1				5					10

<210> 10

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 10

His	Tyr	Ala	Lys	Ile	Ala	Ala	Asp	Phe
1				5				

<210> 11

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 11

Lys	Tyr	Asn	His	Ile	Asp	Glu	Ser	Glu	Met
1				5					10

<210> 12

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 12

Ser	Leu	Asp	Glu	Lys	Pro	Arg	Ile	Val	Val
1				5					10

<210> 13
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> immune-stimulating peptide

<400> 13

Arg Leu Tyr Gln Glu Cys Glu Lys Leu
1 5

<210> 14
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> immune-stimulating peptide

<400> 14

Lys Leu Met Ser Ser Asn Ser Thr Asp Leu
1 5 10

<210> 15
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> immune-stimulating peptide

<400> 15

Leu Met Ser Ser Asn Ser Thr Asp Leu
1 5

<210> 16
<211> 10
<212> PRT
<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 16

Ser	Gln	Phe	Glu	Glu	Leu	Cys	Ala	Glu	Leu
1				5					10

<210> 17

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 17

Lys	Ile	Gly	Arg	Phe	Val	Val	Gln	Asn	Val
1				5					10

<210> 18

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 18

Tyr	Val	Tyr	Glu	Phe	Arg	Asp	Lys	Leu
1				5				

<210> 19

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 19

Leu Leu Thr Glu Thr Glu Asp Trp Leu
 1 5

<210> 20
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> immune-stimulating peptide

<400> 20

Trp Leu Tyr Glu Glu Gly Glu Asp Gln Ala
 1 5 10

<210> 21
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> immune-stimulating peptide

<400> 21

Glu Leu Met Lys Ile Gly Thr Pro Val
 1 5

<210> 22
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> immune-stimulating peptide

<400> 22

Val Met Asn Ala Gln Ala Lys Lys Ser Leu
 1 5 10

<210> 23
 <211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> immune-stimulating peptide

<400> 23

Glu	Cys	Val	Tyr	Glu	Phe	Arg	Asp	Lys	Leu
1				5					10